



Snow Spotter Newsletter Winter 2003-2004



Fall 2003 Snow Spotter Training a Success

The National Weather Service in Northern Indiana conducted the first organized snow spotter training last fall since the office opened in 1998. The snow spotter training was an overwhelming success with 316 snow spotters trained to date. Since the training presentations, snow spotters have assisted forecasters here at the National Weather Service on many occasions by reporting snow and ice amounts, blowing and drifting snow, and precipitation type changes. Training took place at 11 regional locations last fall. Next year we plan on expanding the snow spotter training sessions into another group of counties in our 37 county warning area.

We are looking into the possibility of giving away rain gages to several of our most reliable and accurate snow spotters. At the end of this winter we will pick who has been the best snow spotter by looking at the number, timeliness, and accuracy of reports. Keep up the good work!

E-Spotter Becoming More Popular

Over the past month we have noticed an increase in the number of e-spotter reports we receive on a daily basis. We encourage any trained spotter with computer and internet access to sign up for e-spotter. You can find the e-spotter web address in the training materials you received at the snow spotter training sessions.

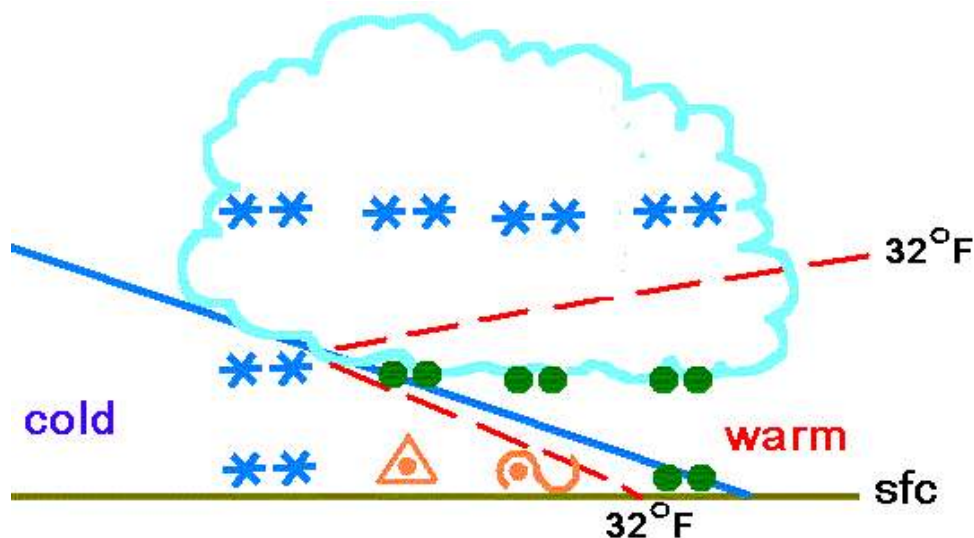
A reminder, if you send in a report via the web, please do so with e-spotter. We receive the e-spotter reports in real time at our office. The other link on our web page, entitled "Submit a Report" does not get to us in real time.

January 4-5 Snow and Ice Storm

January started off on a balmy note with record highs of near 60 degrees on the 2nd and 3rd of the month at both South Bend and Fort Wayne. This all changed by the 4th as much colder and more seasonable air began to build south into the region. A storm system moved east through the Ohio Valley drawing moisture northward from the Gulf of Mexico. Warmer air was still trying to advance northward above the surface, while much colder air was moving in at the surface from the north. This set the stage for a significant sleet and freezing rain storm in northern Indiana and northwest Ohio. The accumulation of freezing rain on trees and power lines caused scattered power outages, and slick roads resulted in numerous traffic accidents. Farther north in South Bend and southwest Michigan the precipitation was all snow.

The heaviest ice accumulations occurred along the Wabash River from Monticello to near Fort Wayne with widespread reports of ½ inch of freezing rain. The heaviest snow from the event was found on the north side of Fort Wayne where around 5 inches of snow fell early in the event before changing over to freezing rain. 3 to 5 inches of snow also fell across southern Michigan and the South Bend area.

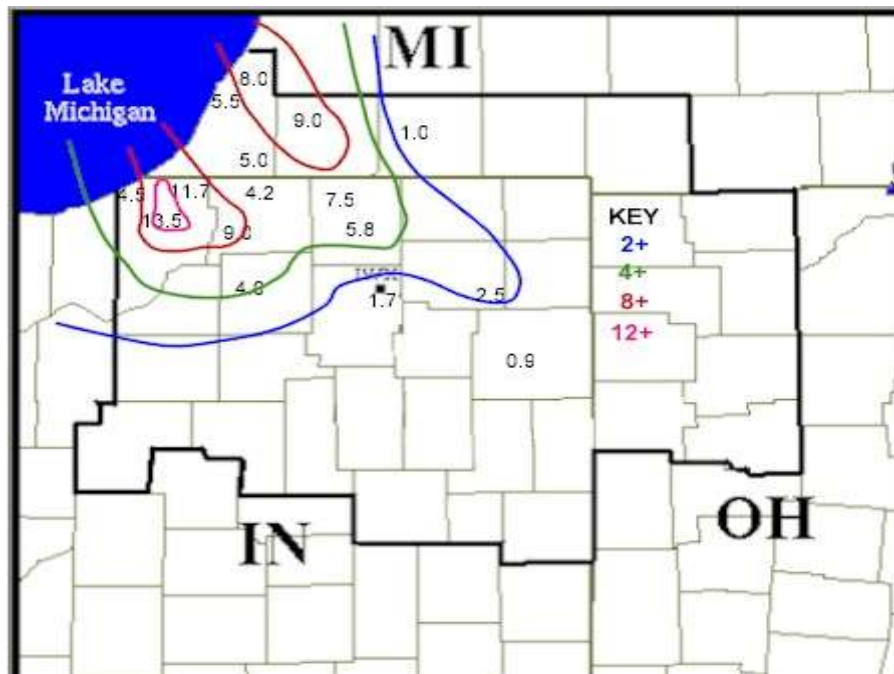
This was a classic case of warmer air moving aloft over colder air at the surface. Below is the diagram which appeared in the snow spotter training presentation. Imagine the Wabash River at the center of the diagram where the cold air is very shallow, and South Bend at the left side of the diagram where the cold air was much deeper. Near the Wabash river snow fell into the warm layer of air aloft, melting into raindrops, then froze upon contacting a surface below freezing, creating a dangerous glaze of ice. Further north in South Bend in the deep cold air, snowflakes were able to make it all the way to the surface without melting.



January 18-20 Lake Effect Snow

The first significant lake effect snow event of the season was late arriving this year, not coming until mid January. The lake effect snow machine made up for lost time by dumping 8 to 12 inches of snow on northwest Indiana and southwest Michigan. Several lake effect snow events had targeted areas further north around Grand Rapids earlier in January. This time the winds were more northerly, allowing the lake effect snow to spread further south.

This was a long lasting lake effect event, beginning on the morning of the 18th and not ending until the morning of the 20th. General accumulations of 4 to 8 inches occurred in northwest Indiana and southwest Michigan. This was a multiple band event, meaning that many small bands of lake effect snow developed, as opposed to just one larger band. There were however two dominant bands within the multiple bands. One formed over LaPorte County Indiana and dropped over a foot of snow in the central part of the county. The other formed over northern Berrien and northwest Cass counties in Michigan where 8 to 9 inches fell. The big winner for this event was the city of LaPorte with a storm total of 13.5 inches. Not far behind was Rolling Prairie, also in LaPorte County with 11.7 inches. South Bend was caught between the two heavier bands and only received 4 to 5 inches of snow.



January 28-29 Snowstorm

This most recent storm was the largest general snowfall of the year so far with 7 to 12 inches common across northern Indiana and Southern Michigan. The snow fell in two distinct periods. Low pressure developed in the central plains then moved northeast through southern Indiana and Ohio. The first shot of snow developed out ahead of the low pressure on the morning of the 28th. The region then came under the influence of a dry slot, which caused a break in the snow. Overnight on the 28th into the morning of the 29th a mid level disturbance passed over the area along with deeper moisture, bringing the second round of snow. To top it all off, northwest Indiana and southwest Michigan received lake enhanced snowfall during the day on the 29th.

The heaviest snowfall was found over extreme northern Indiana and southern Michigan. Central Indiana and northwest Ohio received much less snow as the precipitation turned to freezing rain for a portion of the storm. Winds of 15 to 25 mph created blowing and drifting snow, especially on north/south roads. An interesting note, for the first half of the storm the winds were easterly, then switched to northwest as the low departed. This created snow drifts on both the east and west side of the north/south roads.



Your Part in the Forecast Process

The snowfall maps you see above would not be possible if not for our dedicated volunteer snow spotters. In our 37 county warning area, we have only 3 official snow measuring sites. We rely on you, the volunteer snow spotters to keep informed on what is happening at ground level. Thank you for the reports, they are helping us provide a better service! You can view your reports on our web page. Off the quick click weather menu on the main page, click on Public Information Statement. We typically issue a Public Information Statement (PNS) several times during the larger snow events.

Season Snowfall Totals

A reminder, if you are keeping track of your daily snowfall, please report your seasonal total to us in the first week of April. We can then use your reports to piece together a seasonal snowfall map for the area. You can send in your reports via phone or e-spotter, or email me at

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